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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,834	03/05/2002	Keitaro Aoshima	003510-123	4828
7590	10/06/2003			
Platon N. Mandros BURNS, DOANE, SWECKER & MATHIS, L.L.P. P.O. Box 1404 Alexandria, VA 22313-1404			EXAMINER HAMILTON, CYNTHIA	
			ART UNIT 1752	PAPER NUMBER

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/087,834

Applicant(s)

AOSHIMA, KEITARO

Examiner

Cynthia Hamilton

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 6/6/02, 3/5/02.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 17-20 is/are rejected.
- 7) ☒ Claim(s) 4, 15 and 16 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

### DETAILED ACTION

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limits of claim 8 are indefinite because variables  $Ar^1$ ,  $Y^1$ ,  $R^3$ ,  $Z^1$ ,  $R^5$ ,  $R^6$ ,  $R^7$ ,  $R^8$ ,  $R^4$ ,  $Y^2$  and  $Ar^2$  are not defined. Thus, what the limits of the cyanine dye are cannot be determined.

3. The examiner notes that the overcoat of instant claims 1, 3-20 has no designated location with respect to the substrate or the photosensitive layer(s). Only claim 2 positions this layer. The same is true of the undercoat layer, the intermediate layer and the backcoat layer found in claim 20. What is required is that the overcoat be part of the planographic printing plate precursor. The entire tenor of the instant specification is that this overcoat layer is on top of the photosensitive layer without the substrate in between, but claims 1, 3-10 do not so limit it. The examiner notes that applicants on page 6 define "hydrophobic property" but never claim "hydrophobic". Hydrophobic is assumed to be broader in meaning because that property set forth in claim 4 which is the property set forth on page 6 for "hydrophobic property" must further limit claim 1 or it is a duplicate of claim 1.

4. Claim 4 is provisionally objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. If the limit of claim 4 is the meaning of

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hydrophobic in claim 1 then claim 4 fails to further limit the subject matter of claim 1 in any manner. This is provisional because the examiner is not sure if applicants intended a broader meaning for "hydrophobic" in claim 1 than is given in claim 4.

5. Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The examiner notes that claim 8 requires that a copolymer be comprised of at least 10 mol% of a compound. The examiner is confused on this point. Is a mixture of copolymers claimed wherein some copolymer is this 10mol% or are applicants trying to claim that 10 mol% of the monomeric makeup of the copolymer be from 10 mol% of this compound? Clarification as to what is meant here may remove this confusion.

6. Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. What is meant by "does not have sensitivity to exposed layer" in claim 3 is unclear. There is no exposed laser part of the plate claimed. This appears to be an intended use issue without defining what laser the layer in question is not sensitive to. Is this all lasers? Is this IR lasers is this a specific laser?

7. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. What is meant by "mmg/g" in the defining of "the functional group content in a polymer has an equivalence of 0. to 12 mmg/g"? It is in reference to page 18 of the disclosure:

*"These functional groups (acid radicals) allow the polymer to be alkali-soluble, while they act to enhance a hydrophilic property of the polymer. Therefore, it is preferable that the*

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*content of the functional group in the polymer be low to an extent which does not inhibit the alkali-solubility of the polymer. Preferably, an equivalence of the functional group content in a polymer (to 1 g of the polymer is 0.1 to 12 mmg/g, and more preferably 0.5 to 8 mmg/g."*

The examiner is unsure in claim 7 what a functional group is and how to weigh it so as to determine the "mmg". Is this the monomeric unit containing the "function" or the "function" alone? It is so unclear that a worker of ordinary skill in the art would not know what limit is being set forth in claim 7.

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(d) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the

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reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-10, 17-20 are rejected under 35 U.S.C. 102(a or e) as being anticipated by Hauk (US 6,55,291 or WO 02/14071 A1). Both Hauk references are essentially the same. The WO Hauk document has a publication date of February 21, 2002 making its disclosure applicable under 35 USC 102 (a). It has no 35 USC 102 (e) date because there is no US designated state. The US Hauk document is applicable under 35 USC 102 (e). The examples of Hauk anticipate the instant planographic printing plate precursor wherein the negative diazo resin is the instant crosslinkable compound. In Hauk, see particularly the abstract and the Summary of the invention. The top layer is inherently possessed of the properties of hydrophobicity required since it is present to act as an ink receptive layer and it is made from some of the same polymers as set forth by applicants, i.e. novolacs and sulphonamides.

11. Claims 1-14, 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hauk (US 6,55,291 or WO 02/14071 A1). Hauk discloses the instant planographic printing plate precursor with the use of phenolic or sulfonamide polymers in his top coat layer. The top layer is not described in reference to a contact angle but instead is required to be developable in aqueous base developer with the imaged material being removed and the non imaged material remaining. It is the top layer that is ink receptive, i.e. hydrophobic. In col. 13 under Image

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Formation, the image formed is positive leaving the top layer as it was in its unexposed state, after development the plate is overall cured if a negative-working base soluble photosensitive composition is the underlayer. Hauk discloses the use of photopolymerizable and photocrosslinkable negative working base soluble photosensitive composition under layers with photothermal conversion materials which are preferably not in the top layer. Thus, with respect to instant claims 1-14 and 17-20, the thermal digital lithographic printing plates of Hauck wherein the negative-working base soluble photosensitive composition is the underlayer are obvious in view of their use in the examples and the use of photopolymerizable elements in the a negative-working base soluble photosensitive composition is obvious because they are taught to be so used. In Hauk, see particularly claims, examples, abstract, and particularly "Negative-Working Base Soluble Photosensitive Compositions".

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shimazu et al (6,352,812 B1 or WO 99/67097) teach the formation of similar layers to that of applicants but the top layer is not required to be aqueous base soluble. Although the example of an acrylic acid top coat polymer might be so, there is no disclosure of it specifically being used with a photocurable or crosslinkable composition layer having a photothermoconversion material present. The use of PMMA is made with the disclosed crosslinking layers in Shimazu et al. The only requirement of Shimazu et al with respect to solubility that it not be aqueous soluble. Shimazu et al does reference ionic polymerizable as well as radical polymerizable systems in the underlayer. Kanda et al (4,445,998) is cited to show in col. 5-6 to show that a contact angle of less than 30 degrees is considered good for a hydrophilic surface on a printing plate, 30-50 degrees is not so good and greater than 50 degrees

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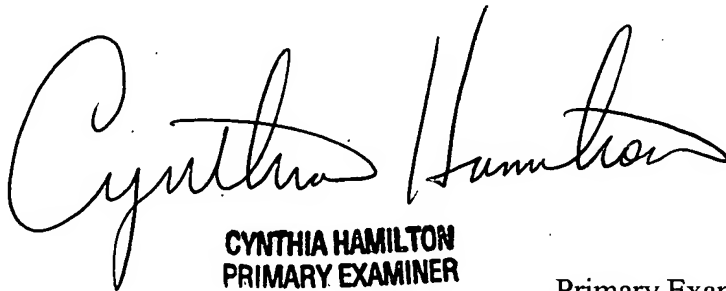
really bad. Gardener, Jr. et al (5,506, 090) is cited to show in col. 12 that most of the protective top coats, i.e. polyvinyl alcohol, used in the printing plate art do not have sufficient contact angle to meet applicant's definition of hydrophobicity.

13. Claims 15-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

*Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Hamilton whose telephone number is (703) 308-3626. The examiner can normally be reached on Monday-Friday, 9:30 am to 5:00 pm.*

*If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Baxter can be reached on (703) 308-2303. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.*

*Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305 0661.*

A handwritten signature in black ink, appearing to read "Cynthia Hamilton". The signature is fluid and cursive, with the first name "Cynthia" being larger and more prominent than the last name "Hamilton".

**CYNTHIA HAMILTON  
PRIMARY EXAMINER**

Primary Examiner Cynthia Hamilton  
September 29, 2003